What is claimed is:

1.   A driving method of a plasma display panel, the driving method comprising the steps of:

checking whether or not a first input grayscale data can be expressed through a certain pixel on the panel;

in case the first grayscale data cannot be expressed, outputting a second grayscale data adjacent to the first grayscale data; and

respectively multiplying erroneous data corresponding to a difference between the first grayscale data and the second grayscale data with preset coefficient values to diffuse the multiplied result to a plurality of pixels adjacent to the pixel,

wherein before the erroneous data are respectively multiplied with the preset coefficient values, a random value is multiplied to at least one coefficient value among the plurality of coefficient values.

2.   The driving method according to claim 1, wherein each of the coefficient values is set as any one of $1/n$ to 1 when n is integer.

3.   The driving method according to claim 1, wherein the random value is randomly generated as any one of 1 to n when n is integer.

25

4.   The driving method according to claim 1, wherein each of the coefficient values is multiplied with random values different from one another.

5.   The driving method according to claim 1, further comprising the steps of:

adding resultant values obtained by respectively multiplying the erroneous data with the coefficient values, to one another; and

adding the added resultant values to a third grayscale data inputted next to the first grayscale data.

6.   A driving method of a plasma display panel in which erroneous data for a certain pixel is diffused to a plurality of pixels adjacent to the certain pixel, the driving method comprising the steps of:

generating at least one random value;

respectively multiplying the at least one random value to at least one coefficient value; and

respectively multiplying the plurality of coefficient values multiplied with the at least one random value, with the erroneous data.

7.   The driving method according to claim 6, wherein in case the plurality of coefficient values are set as any one

between 1/n to 1 when n is integer, the random value is randomly generated as any one of 1 to n.

8.   A driving apparatus of a plasma display panel, the driving apparatus comprising:

means for checking whether or not a first input grayscale data can be expressed through a certain pixel on the panel;

means for calculating erroneous data corresponding between the first grayscale data and a second grayscale data adjacent to the first grayscale data in case the first grayscale data cannot be expressed;

a plurality of diffusion means for diffusing the calculated erroneous data to the plurality of pixels adjacent to the pixel;

a plurality of multiplying means for respectively multiplying erroneous data respectively outputted from the plurality of diffusion means with preset coefficient values;

first adding means for adding multiplied values respectively outputted from the plurality of multiplying means, to one another;

second adding means for adding the added values outputted from the first adding means with a third grayscale data inputted next to the first grayscale data; and

at least one random generating means for generating at least one random value to supply the generated random value to at least one multiplying means among the plurality of multiplying means.

9.   The driving apparatus according to claim 8, wherein the checking means comprises a lookup table for storing a plurality of grayscale data, that can be expressed with a plurality of luminance weighted values, to output grayscale data corresponding to an input grayscale data.

10.   The driving apparatus according to claim 8, wherein the checking means outputs a corresponding grayscale data in case the grayscale data corresponding to the input grayscale data exists at the lookup table.

11.   The driving apparatus according to claim 8, wherein the checking means outputs grayscale data adjacent to the input grayscale data in case the grayscale data corresponding to the input grayscale data does not exist at the lookup table.

12.   The driving apparatus according to claim 8, wherein the erroneous data is a value obtained by subtracting the second grayscale data from the first grayscale data.

13.   The driving apparatus according to claim 8, wherein each of the plurality of diffusion means spatially delays the calculated erroneous data to diffuse the delayed data to the adjacent plurality of pixels.

28

14. The driving apparatus according to claim 8, wherein each of the plurality of multiplying means multiplies erroneous data, a coefficient value and a random value in case a random value is supplied from the at least one random generating means.

15. The driving apparatus according to claim 8, wherein in case the plurality of coefficient values are set as any one of 1/n to 1 when n is integer, the random value is randomly generated as any one of 1 to n.

16. The driving apparatus according to claim 8, wherein the at least one random generating means respectively comprises:

a plurality of shift registers comprised of a plurality of bits;

a plurality of exclusive logical sum gates respectively connected to the plurality of shift registers; and

means for outputting a random value generated by combining bit values respectively outputted from the plurality of shift registers.

17. The driving apparatus according to claim 16, wherein the plurality of exclusive logical sum gates respectively has an input terminal connected to at least two bits among a plurality of bits of each of the plurality of shift registers, and an output terminal connected to a least significant bit of each of the plurality of shift registers.

18. The driving apparatus according to claim 16, wherein the each of the input terminals of the plurality of exclusive logical sum gates is connected to prime-numbered bits among a plurality of bits of each of the plurality of shift registers.

19. The driving apparatus according to claim 16, wherein an output value of the most significant bit of each of the plurality of shift registers is inputted to the output means.